INSTALLATION OF SELF CONTAINED BREATHING APPARATUS (SCBA)

INSTALLATION SUMMARY

- SHIPALT for HP Air Modifications
  - Installation of piping and labels
    - **Tie-In between ship's HP Air System and HPFA**
    - **Additional capacity (air flasks) for amphibious class**
  - Installation of additional sound-powered phone circuits and/or lighting
  - Installation of BACS (HPFA and ABPA)
  - Inspection, NDT and mapping of all welds in accordance with NAVSEA T9074-AS-G1B-010/271
  - Hydrostatic testing in accordance with GSO Section 551y
  - Flushing and cleaning in accordance with MIL-STD-1622
  - Air sampling and certification per ANSI/CGA G7.1-1997 meeting Grade D requirements
- SHIPALT for SCBA and Locker Installation
  - Ripout, relocation and removal of OBA's, canisters and stowages
  - Installation of SCBA stowages and loadout of apparatus/cylinders

SCBA INSTALLATION PROGRAM

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INSTALLATION TIMEFRAME

SHIP CLASS	SHIPALT FOR HP AIR MODIFICATION	SHIPALT FOR SCBA/LOCKER INSTALLATION
CG-47	2 WEEKS	3 WEEKS
DDG-51	3 WEEKS	3 WEEKS
LSD-41	5 WEEKS	4 WEEKS
LHA-1	5 WEEKS	7 WEEKS
LPD	10 WEEKS	5 WEEKS
CV/CVN	7 WEEKS	9 WEEKS
FFG-7	3 WEEKS	3 WEEKS
ARS-50	2 WEEKS	2 WEEKS
LHD-1	4 WEEKS	5 WEEKS
AS-39	5 WEEKS	4 WEEKS
LCC-19	5 WEEKS	4 WEEKS
MCM	2 WEEKS	
SSN	3 WEEKS	

- Installation of each SHIPALT can be performed independently of the other; thus

EQUIPMENT INSTALLED

- HP air piping and valve branch connections
- HP air line system pressure gauges
- Breathing Air Charging Station
  - High Pressure Filter Assembly (HPFA)
  - Air Booster Pump Assembly (ABPA)
  - Charging Wand Assembly
- Stowage locations for booster pumps and pelican cases
- SCBA Stowages
  - SCBA Lockers
  - SCBA Bags
- SCBA's and Cylinders
- Diesel-Driven Air Compressors
  - Stowage locations
  - Weather proof enclosure
- Breathing Air Test Kit
- Breathing Air Reducing Station (BARS)

SCBA INSTALLATION PROGRAM

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SHIP CONFIGURATION

SHIP CLASS	SCBA APPARATUS	CYLINDERS		DIESEL DRIVEN AIR COMPRESSOR	BREATHING AIR CHARGING SYSTEM	AIR POWERED BOOSTER PUMPS	BREATHING AIR REDUCING STATIONS
		30-min	45-min				
CG-47	55	98	98	3	3	2	1
CV-63,64,67	382	746	364	2	8	4	2
CVN-65	382	746	364	2	2	4	2
8803K	90		90				
CVN-68	382	746	364	2	8	4	2
8803K	56		56				
DDG-51	73	98	98	3	3	2	1
LHA-1	144	273	273	6	5	3	2
LHD-1	278	278	278	6	5	3	2
LSD-41	95	183	183	3	3	2	1
FFG-7	55	98	98	3	3	2	1
ARS-50	31	39	39	1	2	2	1
LPD-4	73	183	183	3	3	N/A	1
MCM-1	25	71	0	(1 - electric compressor)	0	0	1
LCC-19	91	183	273	3	3	2	1
AS-39	61	183	98	3	3	2	1

SUBMARINE CONFIGURATION

SHIP CLASS	SCBA APPARATUS	CYLINDERS		BREATHING AIR CHARGING SYSTEM	STORED CAPACITY [CUBIC FEET / MAN HOUR]
		30-min	45-min		
SSN-688	14	14	-	2	1260 ft^3 / 11 mhr
SSN21-22	14	14	-	2	1260 ft^3 / 11 mhr
SSN-23	16	16	-	3	1440 ft^3 / 12.57 mhr
SSBN-726	20	20	-	3	1800 ft^3 / 15.8 mhr
SSGN	20	20	-	2	1800 ft^3 / 15.8 mhr
SSN774	14	14	-	2	1260 ft^3 / 11 mhr

SCBA INSTALLATION PROGRAM

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Completed & Planned SCBA Installations FY01-FY07

SHIP CLASS	FY01 & PRIOR	FY02	FY03	FY04	FY05	FY06	FY07
CG-47	8	10	3	1	1	1	-
DDG-51	12	4	3	2	-	-	-
LHA-1	1	2	2	-	-	-	-
LHD-1/5	-	-	1	1	1	2	-
LSD-41/49	4	-	-	-	4	3	-
CV/CVN	2	1	2	1	-	-	-
FFG-7	-	-	1	4	10	10	5
MCM-1	-	-	-	-	-	8	6
MHC-51	-	-	-	-	-	-	-
ARS-50	-	-	2	2	-	-	-
AS-39	-	-	-	-	-	-	2
LCC-19	-	-	-	-	-	1	-
LPD-4	-	-	1	3	1	1	-

FY03 INSTALLATIONS

- TICONDEROGA CLASS
  - CG-66, USS Hue City (MAY) **INSTALLED 4/03**
  - CG-67, USS Shiloh (SDGO) **INSTALLED 7/03**
  - CG-69, USS Vicksburg (MAY) **INSTALLED 4/03**
- ARLEIGH BURKE CLASS
  - DDG-58, USS Laboon (NORVA) **INSTALLED 3/03**
  - DDG-60, USS Paul Hamilton (PEARL) **INSTALLED 8/03**
  - DDG-64, USS Carney (MAY) **INSTALLED 7/03**
  - DDG-65, USS Benfold (SDGO) (Partial Install)
- SAFEGUARD CLASS
  - ARS-52, USS Salvor (PEARL) **INSTALLED 11/03**
  - ARS-53, USS Grapple (NOR) **INSTALLED 12/02**
- OLIVER HAZARD PERRY CLASS
  - FFG-59, USS Kauffman **INSTALLED 7/03**
- TARAWA CLASS
  - LHA-3, USS Belleau Wood (SDGO) **INSTALLED 9/03**
  - LHA-4, USS Nassau (NORVA) **INSTALLED 1/04**
- WASP CLASS
  - LHD-2, USS ESSEX (SASEBO) **ONGOING**
- CLEVELAND CLASS
  - LPD-9, USS Denver (SDGO) **ONGOING**
  - LPD-13, USS Nashville (NORVA) **avail moved to FY04**
- JOHN F. KENNEDY CLASS
  - CV-67, USS John F. Kennedy (MAY)
    - **INSTALLED 9/03**
- NIMITZ CLASS
  - CVN-72, USS Abraham Lincoln (BREM) **9/8/0**
- LOS ANGELES CLASS
  - SSN 764, USS BOISE **INSTALLED 8/03**

SCBA INSTALLATION PROGRAM

FY04 INSTALLATIONS

- **TICONDEROGA CLASS**
  - CG-61, USS Monterey (NORVA) **2/16/04-4/1/04**
- **ARLEIGH BURKE CLASS**
  - DDG-51, USS Arleigh Burke (NORVA) **Complete 3/04**
  - DDG-65, USS Benfold (SDGO) 4/11/04-5/1/04
- **SAFEGUARD CLASS**
  - ARS-50, USS Safeguard (SASEBO) **6/30/04 – 7/30/04**
  - ARS-51, USS Grasp (NORVA) **5/17-6/4; 8/9-8/27; 11/1-11/19/04**
- **OLIVER HAZARD PERRY CLASS**
  - FFG-47, USS Nicholas (NORVA) **3/22/04-5/1/04**
  - FFG-52, USS Carr (NORVA) **Complete 3/04**
  - FFG-58, USS Samuel B. Roberts (MAY) **5/12/04**
  - FFG-61, USS Ingraham (EVERETT) **Complete 4/04**
- **WASP CLASS**
  - LHD-3, USS Kearsarge (NORVA) **(PMA 1/12-4/14/04)**
- **CLEVELAND CLASS (SY Installed)**
  - LPD-7, USS Cleveland (SDGO) **(DPMA 3/17-8/8)**
  - LPD-8, USS Dubuque (SDGO) **(DPMA 6/23-11/10)**
  - LPD-13, USS Nashville (NORVA) **(DPMA 1/6-6/30)**
- **NIMITZ CLASS**
  - CVN-65, USS Enterprise (NORVA) **(9/7/04)**
  - CVN-74, USS John C. Stennis (SDGO) fix 8803

FY05 INSTALLATIONS

- **TICONDEROGA CLASS**
  - CG-52, USS Bunker Hill (Sdgo) 7/20/05 – 9/21/05
- **OLIVER HAZARD PERRY CLASS**
  - FFG-8, USS McInerney (May) 11/1/04 –12/30/04
  - FFG-28, USS Boone (May) 5/14/05 - 7/6/05
  - FFG-36, USS Underwood (May) 7/6/05 – 11/22/05
  - FFG-43, USS Thach (Sdgo) 7/20/05 – 9/21/05
  - FFG-45, USS DeWert (May) 2/9/05 – 4/13/05
  - FFG-50, USS Taylor (May) 8/3/05 – 12/21/05
  - FFG-54, USS Ford (Everett) 12/13/04 – 1/31/05
  - FFG-55, USS Elrod (NorVa) 11/15/04 – 1/12/05
  - FFG-56, USS Simpson (May) 1/3/05 – 2/16/05
- **WASP CLASS**
  - LHD-1, USS Wasp (NorVa) 1/15/05-3/9/05
- **WHIDBEY ISLAND CLASS**
  - LSD-42, USS Germantown (SDGO) 1/12/05-3/20/05
  - LSD-45, USS Comstock (SDGO) 2/16/05-4/20/05
- **HARPERS FERRY CLASS**
  - LSD-49, USS Harpers Ferry (Sasebo) 8/31/05-11/2/05
  - LSD-51, USS Oak Hill (NORVA) 4/20/05-6/21/05

SCBA INSTALLATION PROGRAM

PLANNED INSTALLATIONS FY06

- **TICONDEROGA CLASS**
  - **CG-56, USS San Jacinto (NorVa) 4/19/06 – 10/11/06**
- **OLIVER HAZARD PERRY CLASS**
  - **FFG-33, USS Jarrett (San Diego) 6/28/06 – 9/6/06**
  - **FFG-39, USS Doyle (May) 1/9/06 – 4/21/06**
  - **FFG-40, USS Halyburton (May) 11/20/05 – 1/22/06**
  - FFG-41, USS McClusky (San Diego) 8/09/06 – 10/11/06
  - FFG-42, USS Klakring (May) 7/26/06 – 9/29/06
  - **FFG-46, USS Rentz (San Diego) 1/11/06 – 5/31/06**
  - **FFG-49, USS Robert G. Bradley (May) 11/30/05 – 3/17/06**
  - **FFG-51, USS Gary (Yoko) 8/16/06 – 10/18/06**
  - **FFG-53, USS Hawes (Norfolk) 5/03/06 – 7/26/06**
  - **FFG-60, USS Rodney M. Davis (Everett) 1/11/06 – 3/13/06**
- **BLUE RIGE CLASS**
  - LCC-19, USS Blue Ridge (Yoko) 9/11/06 –11/17/06
- **WASP CLASS**
  - **LHD-4, USS Boxer (San Diego) – 3/25/06 – 6/30/06**
  - **LHD-5, USS Bataan (Norfolk) 1/23-2/10; 3/20-4/10; 7/10-8/11/06**
- **WHIDBEY ISLAND CLASS**
  - LSD-43, USS Fort McHenry (Little Creek) 8/30 - 11/1/06
- **HARPERS FERRY CLASS**
  - LSD-50, USS Carter Hall (NorVa) 9/6/06 – 11/8/06
  - **LSD-52, USS Pearl Harbor (SDGO) 4/5/06 – 7/18/06**
- **AVENGER CLASS**
  - **MCM-3, USS Sentry (Ingleside) 10/12/05-12/14/05**
  - **MCM-5, USS Guardian (Sasebo) 5/3/06-7/26/06**
  - **MCM-6 USS Devastator (Ingleside) 3/6/06 – 3/21/06**
  - MCM-7, USS Patriot (Sasebo) 7/27/06-8/11/06
  - **MCM-8, USS Scout (Ingleside) 1/18/06-3/22/06**
  - **MCM-10, USS Warrior (Ingleside) 4/26/06 – 6/28/06**
  - MCM-11, USS Gladiator (Ingleside) 7/12/06-9/13/06
  - **MCM-14, USS Chief (Ingleside) 9/27/06 – 11/29/06**

Blue indicates ongoing installation **Green indicates completed installation**

SSN 688 CLASS with SCBA

- **LOS ANGELES CLASS**
  - –SSN-688, USS Los Angeles
  - –SSN-690, USS Philadelphia
  - –SSN-691, USS Memphis
  - –SSN-699, USS Jacksonville
  - –SSN-700, USS Dallas
  - –SSN-701, USS LaJolla
  - –SSN-705, USS Corpus Christi
  - –SSN-706, USS Albuquerque
  - –SSN-708, USS Minneapolis St. Paul
  - –SSN-709, USS H.G.Rickover
  - –SSN-710, USS Augusta
  - –SSN-711, USS San Francisco
  - –SSN-713, USS Houston
  - –SSN-714, USS Norfolk
  - –SSN-715, USS Buffalo
  - –SSN-717, USS Olympia
  - –SSN-718, USS Honolulu
  - –SSN-719, USS Providence
  - –SSN-720, USS Pittsburg
  - –SSN-721, USS Chicago
  - –SSN-722, USS Key West
  - –SSN-723, USS Oklahoma City
  - –SSN-724, USS Louisville
  - –SSN-725, USS Helena
  - –SSN-750, USS Newport News
  - –SSN-751, USS San Juan
  - –SSN-752, USS Pasadena
  - –SSN-754, USS Topeka
  - –SSN-753, USS Albany
  - –SSN-755, USS Miami
  - –SSN-756, USS Scranton
  - – SSN-757, USS Alexandria
  - –SSN-758, USS Asheville
  - –SSN-759, USS Jefferson City
  - –SSN-760, USS Annapolis
  - –SSN-762, USS Columbus
  - –SSN-763, USS Santa Fe
  - –SSN-764, USS Boise
  - –SSN-765, USS Montpelier
  - –SSN-766, USS Charolotte
  - –SSN-767, USS Hampton
  - – SSN-768, USS Hartford
  - –SSN-769, USS Toledo
  - –SSN-770, USS Tuscan
  - –SSN-771, USS Columbia
  - –SSN-772, USS Greeneville
  - –SSN-773, USS Cheyenne

SCBA INSTALLATION PROGRAM

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ATLANTIC FLEET SURFACE COMBATANTS with SCBA

- **TICONDEROGA CLASS**
  - CG-48, USS Yorktown (PASC)
  - CG-55, USS Leyte Gulf (NORVA)
  - CG-58, USS Philippine Sea (MAY)
  - CG-60, USS Normandy (NORVA)
  - CG-61, USS Monterey (NORVA)
  - CG-64, USS Gettysburg (MAY)
  - CG-66, USS Hue City (MAY)
  - CG-68, USS Anzio (NORVA)
  - CG-69, USS Vicksburg (MAY)
  - CG-71, USS Cape St. George (NORVA)
  - CG-72, USS Vella Gulf (NORVA)
- **OLIVER HAZARD PERRY CLASS**
  - FFG-8, USS McInereny (May)
  - FFG-28, USS Boone (May)
  - FFG-36, USS Underwood (May)
  - FFG-39, USS Doyle (May)
  - FFG-40, USS Halyburton (May)
  - FFG-45, USS DeWert (May)
  - FFG-47, USS Nicholas (NorVa)
  - FFG-49, USS Robert G. Bradley (May)
  - FFG-50, USS Taylor (May)
  - FFG-52, USS Carr (NorVa)
  - FFG-55, USS Elrod (NorVa)
  - FFG-56, USS Simpson (May)
  - FFG-58, USS Samuel B. Roberts (May)
  - FFG-59, USS Kauffman (NorVa)
- **ARLEIGH BURKE CLASS**
  - DDG-51, USS Arleigh Burke (NORVA)
  - DDG-52, USS Barry (NORVA)
  - DDG-55, USS Stout (NORVA)
  - DDG-57, USS Mitscher (NORVA)
  - DDG-58, USS Laboon (NORVA)
  - DDG-61, USS Ramage (NORVA)
  - DDG-64, USS Carney (MAY)
  - DDG-66, USS Gonzales (NORVA)
  - DDG-67, USS Cole (PASC)
  - DDG-68, USS The Sullivans (MAY)
  - DDG-71, USS Ross (NORVA)
  - **DDG-72, USS Mahan** (NORVA)**
  - **DDG-74, USS McFaul** (NORVA)**
  - **DDG-75, USS Donald Cook** (NORVA)**
  - **DDG-78, USS Porter** (NORVA)**
  - **DDG-79, USS Oscar Austin** (NORVA)**
  - **DDG-80, USS Roosevelt** (MAY)**
  - **DDG-81, USS Winston S. Churchill ** (NORVA)**
  - **DDG-84, USS Bulkeley ** (NORVA)**
  - **DDG-87, USS Mason ** (NORVA)**

**** Completed by SY during Construction** **** Completed by SY**

SCBA INSTALLATION PROGRAM

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ATLANTIC FLEET – SHIPS with SCBA Installed

- **NIMITZ CLASS**
  - **CVN-69, USS Dwight D. Eisenhower** (NorVa)**
  - CVN-71, USS Theodore Roosevelt (NorVa)
  - CVN-73, USS George Washington (NorVa)
  - **CVN-75, USS Harry S. Truman** (NorVa)**
  - **CVN-76, USS Ronald Reagan** (NorVa)**
- **KITTY HAWK CLASS**
  - CV-67, USS John F. Kennedy (May)
- **ENTERPRISE CLASS**
  - CVN-65, USS Enterprise (NorVa)
- **WASP CLASS**
  - LHD-1, USS Wasp (NorVa)
  - LHD-3, USS Kearsarge (NorVa)
  - LHD-7, USS Iwo Jima ** (NorVa)
- **TARAWA CLASS**
  - LHA-2, USS Saipan (NorVa)
  - LHA-4, USS Nassau (NorVa)
- **SAFEGUARD CLASS**
  - ARS-51, USS Grasp (NorVa)
  - ARS-53, USS Grapple (NorVa)
- **AVENGER CLASS**
  - MCM-3, USS Sentry (Ingleside, TX)
  - MCM-5, USS Guardian (Sasebo, Japan)
  - MCM-6, USS Devastator (Ingleside, TX)
  - MCM-8, USS Scout (Ingleside, TX)
- **WHIDBEY ISLAND CLASS**
  - LSD-44, USS Gunston Hall (NorVa)
  - LSD-46, USS Tortuga (NorVa)
  - LSD-48, USS Ashland (NorVa)
  - LSD-51, USS Oak Hill (NorVa)
- **AUSTIN CLASS (SY Installed)**
  - **LPD-13, USS Nashville (NorVa)**

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**** Completed by SY**

SCBA INSTALLATION PROGRAM

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PACIFIC FLEET SURFACE COMBATANTS with SCBA

- **TICONDEROGA CLASS**
  - CG-49, USS Vincennes (Yoko)
  - CG-52, USS Bunker Hill (San Diego)
  - CG-53, USS Mobile Bay (San Diego)
  - CG-54, USS Antietam (San Diego)
  - CG-57, USS Lake Champlain (San Diego)
  - CG-59, USS Princeton (San Diego)
  - CG-62, USS Chancellorsville (Pearl)
  - CG-63, USS Cowpens (Yoko)
  - CG-65, USS Chosin (Pearl)
  - CG-67, USS Shiloh (San Diego)
  - CG-70, USS Lake Erie (Pearl)
  - CG-73, USS Port Royal (Pearl)
- **ARLEIGH BURKE CLASS**
  - DDG-53, USS John Paul Jones (San Diego)
  - DDG-54, USS Curtis Wilbur (Yoko)
  - DDG-56, USS John S. McCain (Yoko)
  - DDG-59, USS Russell (Pearl)
  - DDG-60, USS Paul Hamilton (Pearl)
  - DDG-62, USS Fitzgerald (San Diego)
  - DDG-63, USS Stethem (San Diego)
  - DDG-65, USS Benfold (San Diego)
  - DDG-69, USS Milius (San Diego)
  - DDG-70, USS Hopper (Pearl)
- **ARLEIGH BURKE CLASS (Continued)**
  - **DDG-73, USS Decatur** (San Diego)**
  - **DDG-76, USS Higgins** (San Diego)**
  - **DDG-77, USS O'Kane** (Pearl)**
  - **DDG-82, USS Lassen** (San Diego)**
  - **DDG-83, USS Howard** (San Diego)**
  - **DDG-85, USS McCampbell** (San Diego)**
  - **DDG-86, USS Shoup** (Everett)**
  - **DDG-88, USS Preble** (San Diego)**
  - **DDG-89, USS Mustin** (San Diego)**
  - **DDG-90, USS Chafee** (Pearl)**
  - **DDG-91, USS Pickney** (San Diego)**
- **OLIVER HAZARD PERRY CLASS**
  - FFG-43, USS Thach (San Diego)
  - FFG-48, USS Vandergrift (Yoko)
  - FFG-54, USS Ford (Everett)
  - FFG-60, USS Rodney M. Davis (Everett)
  - FFG-61, USS Ingraham (Everett)

** Completed by SY during Construction *** Completed by SY

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PACIFIC FLEET - SHIPS with SCBA Installed

- **NIMITZ CLASS**
  - **CVN-68, USS Nimitz*** (San Diego)**
  - CVN-70, USS Carl Vinson (Bremerton)
  - CVN-72, USS Abraham Lincoln (Bremerton)
  - CVN-74, USS John C. Stennis (San Diego)
- **KITTY HAWK CLASS**
  - CV-63, USS Kitty Hawk (Yoko)
- **TARAWA CLASS**
  - LHA-1, USS Tarawa (San Diego)
  - LHA-3, USS Belleau Wood (San Diego)
  - LHA-5, USS Peleliu (San Diego)
- **SAFEGUARD CLASS**
  - ARS-50, USS Safeguard (Sasebo)
  - ARS-52, USS Salvor (Pearl)
- **WHIDBEY ISLAND CLASS**
  - LSD-42, USS Germantown (San Diego)
  - LSD-45, USS Comstock (San Diego)
  - LSD-47, USS Rushmore (San Diego)
  - LSD-49, USS Harpers Ferry (Sasebo)
- **WASP CLASS**
  - LHD-2, USS Essex (Sasebo)
  - LHD-6, USS Bonhomme Richard (SDGO)
- **AUSTIN CLASS (SY Installed)**
  - LPD-7, USS Cleveland (San Diego)
  - LPD-8, USS Dubuque (San Diego)
  - LPD-9, USS Denver (San Diego)

*** Work currently in progress** **** Completed by SY during Construction** ***** Completed**

SCBA INSTALLATION PROGRAM

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SCBA SHIPALTS

CLASS	ALT NUM	REV	ALT_BRIEF
AGF 0000	05240K	00	SCBA HP AIR MODIFICATION
AGF 0000	05241K	00	SCBA AND LOCKER INSTALLATION
AOE 0001	00877K	00	SCBA HP AIR MODIFICATION
AOE 0001	00878K	00	SCBA AND LOCKER INSTALLATION
ARS 0050	01154K	00	SCBA AND LOCKER INSTALLATION
ARS 0050	01155K	00	SCBA HP AIR MODIFICATION
AS 0039	02558K	00	SCBA HP AIR MODIFICATION
AS 0039	02559K	00	SCBA AND LOCKER INSTALLATION
CG 0047	00583K	00	SCBA AND LOCKER INSTALLATION
CG 0047	00584K	00	SCBA HP AIR MODIFICATIONS
CV-63, 64, 67	08761K	00	SELF-CONT BREATHING APP (SCBA)
CV-63, 64, 67	08802K	02	SCBA INSTALL IN MACHY SPACES
CVN 0065	08762K	00	SELF-CONT BREATHING APP (SCBA)
CVN 0065	08803K	00	SCBA INSTALL IN MACHY SPACES
CVN 0068	08588K	00	SCBA AND LOCKER INSTALLATION
CVN 0068	08589K	00	SCBA HP AIR MODIFICATIONS
CVN 0068	08803K	02	SCBA INSTALL IN MACHY SPACES
DDG 0051	00294K	00	SCBA AND LOCKER INSTALLATION
DDG 0051	00295K	00	SCBA HP AIR MODS

CLASS	ALT NUM	REV	ALT_BRIEF
FFG 0007	00438K	00	SCBA AND LOCKER INSTALLATION
FFG 0007	00439K	00	SCBA HP AIR MODIFICATIONS
LCC 0019	01436K	00	SCBA AND LOCKER INSTALLATION
LCC 0019	01437K	00	SCBA HP AIR MODIFICATION
LHA 0001	01055K	00	SCBA HP AIR MODIFICATIONS
LHA 0001	01056K	00	SCBA AND LOCKER INSTALLATION
LHD 1-4	00315K	00	SCBA HP AIR MODIFICATIONS
LHD 1-4	00316K	00	SCBA & LOCKER INSTALLATION
LHD 5-7	03122K	00	SCBA & LOCKER INSTALLATION
LHD 5-7	03123K	00	SCBA HP AIR MODIFICATIONS
LPD 0004	01252K	00	SCBA HP AIR MODIFICATION
LPD 0004	01253K	00	SCBA AND LOCKER INSTALLATION
LSD 0041	01287K	00	SCBA HP AIR MODIFICATIONS
LSD 0041	01288K	00	SCBA & LOCKER INSTALLATION
LSD 0049	05142K	00	SCBA HP AIR MODIFICATIONS
LSD 0049	05143K	00	SCBA & LOCKER INSTALLATION
SSN 0021	04151K	00	REPLACE OBA WITH SCBA
MCM 0001	00309K	00	SCBA & LOCKER INSTALLATION
MHC 0051	00156K	00	SCBA & LOCKER INSTALLATION

SCBA INSTALLATION PROGRAM

Hank Kuzma; NAVSEA 05P4; 202-781-3634;
NAVSEA DAMAGE CONTROL WEBSITE - http://www.dcfp.navy.mil

SCBA EQUIPMENT

SCBA Stowage Locker

SCBA Stowage Bag Assy

Diesel-Driven Air Compressor

Breathing Air Charging System

Breathing Air Reducing Station

COMPONENT DESCRIPTION
SELF CONTAINED BREATHING APPARATUS (SCBA)

- The SCBA is a cylinder-fed, open circuit respirator that supplies positive pressure breathing air to the user.
- All Fiberglass cylinders and carbon cylinders manufactured before May 2001 require hydrostatic testing every three years. Carbon cylinders manufactured after May 2001 have a five year hydrostatic testing requirement.

For listing of DOT approved hydrostatic test centers visit:

http://hazmat.dot.gov/files/approvals/hydro/hydro_retesters.htm

COMPONENT DESCRIPTION
BREATHING AIR CHARGING STATION

- The BACS is used by damage control/fire fighting personnel to charge SCBA's to a pressure of 4500 psi with Grade D breathing quality air (Compressed Gas Association Publication CGA G-7.1).
- The BACS can be used for charging individual SCBA cylinders or quick charging SCBA assemblies.
- The BACS consists of three sub-assemblies
  - Air Booster Pump Assembly (ABPA) - The ABPA is used to increase the pressure from HPAS pressure of 3000 psig to SCBA charging pressure of 4500 psig.
  - High Pressure Filter Assembly (HPFA) - The HPFA is used to filter HPAS air for discharge to the ABPA as breathing air.
  - Connecting Hose Assemblies
- The BACS interface requirements:
  - Connection to ship's HP Air System (nominally 3,000 psig or higher pressure I.e. CVN)

COMPONENT DESCRIPTION
SCBA STOWAGES

- The stowage lockers are used for storage of SCBA's and spare air cylinders
- Locker designs vary to accommodate different numbers of SCBA's and cylinders to be stowed
  - Constructed of 0.063-in sheet aluminum with 1-1/2 x 1-1/2 x 1/8-in aluminum angle base
  - Meet shock requirements of MIL-S-901D for light-weight or medium-weight equipment
  - Meet vibration requirements of MIL-STD-167-1.
- The number of SCBA's and cylinders to be outfitted on the ship is dependant on several factors including:
  - The number of repair party personnel who would don SCBA's.
  - Number of compressors for recharging the cylinders
  - Breathing air requirements for firefighters who are expected to fight a large conflagration

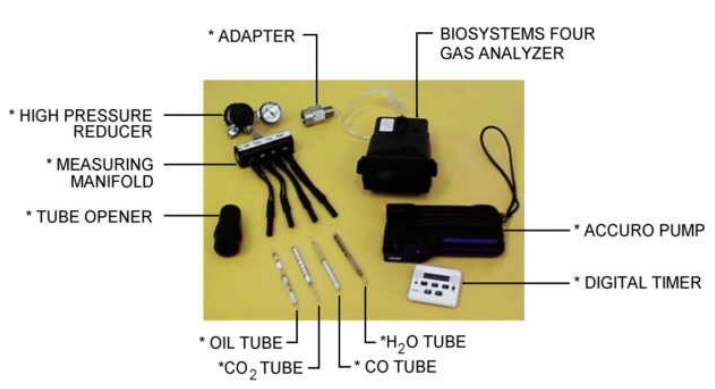
COMPONENT DESCRIPTION
DIESEL-DRIVEN AIR COMPRESSOR

- The diesel-driven air compressor are expected to be used to charge SCBA cylinders when the ship has experienced a loss of electrical power or an HP Air System casualty.
- The system consists of four assemblies
  - Diesel engine which is the motive power for driving the air compressor
  - Air compressor which charges the SCBA cylinders with 4500 psig breathing air
  - Air purification system which produces breathing quality air
  - Hose assemblies, six-foot flexible hoses, which when connected by the compressor operator to the cylinders deliver the 4500 psig breathing quality air charge.
- Loss of electrical power causes a loss of shipboard ventilation which requires the diesel engine-driven compressor to be installed at a location where:
  - Natural ventilation can be used to cool the engine
  - A short path to weather, through a minimum of doors, reduces the opportunity for drawing air from an enclosed space.

Diesel-Driven Air Compressor

COMPONENT DESCRIPTION
BREATHING AIR TESTER

- The breathing air tester is used to ensure that breathing air meets the the Grade D quality requirements as defined in CGA G-7.1.
- The breathing air tester checks the levels for certain elements in high-pressure compressed air including:
  - Oil
  - Carbon Dioxide (CO_2)
  - Carbon Monoxide (CO)
  - Water Vapor
  - Oxygen (O_2)
- Testing is a quarterly requirement of NAVOSH on systems providing breathing quality air to personnel and is performed in accordance with MIP 5519/018 and MRC C5DU N.

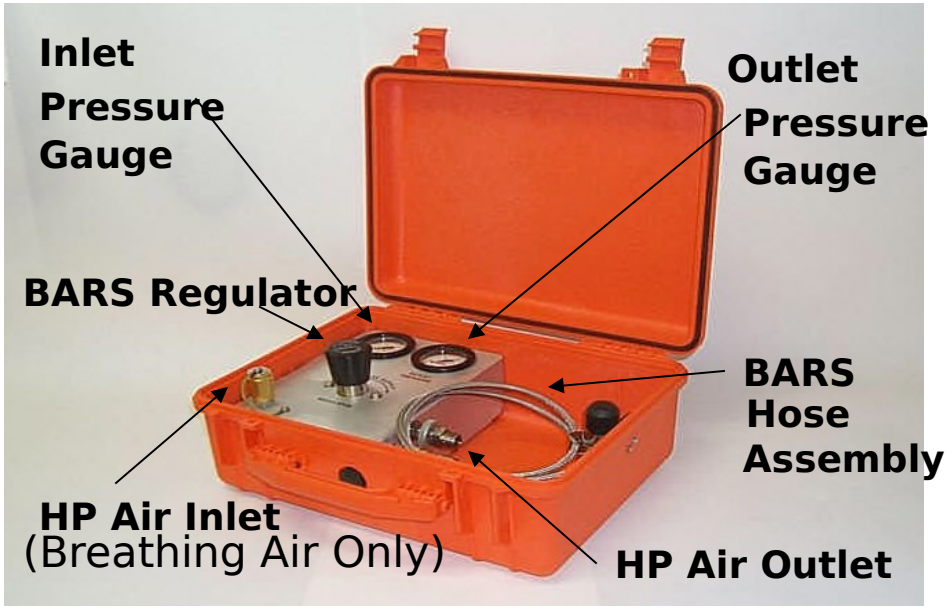


Breathing Air Reducing Station (BARS)

- BARS is a portable air reducing station that is completely self-contained in a hard shell carrying case.

- BARS recharges the Immediately Dangerous to Life and Health (IDLH) SAR/SCBA and SEED cylinders

- BARS consists of:
  - Hose Assembly
  - Charging Adapter/Mounting Bracket for SEED cylinders
  - Regulator
  - Relief Valve
  - Inlet/Outlet Pressure Gauges
  - High Pressure Inlet/Outlet Ports



TYPICAL SCBA EQUIPMENT INSTALLATION

TYPICAL CHARGING STATION

TYPICAL CHARGING STATION

SCBA STOWAGE BAGS

MODEL-E3 SCBA LOCKER

MODEL-E3 SCBA LOCKER

ILS COMPONENTS

- OPNAV 4790/CK FORMS
- Technical Manuals
  - 0910-LP-015-5760, AirPak 4.5
  - 0910-LP-002-7270, SCBA BACS
  - 0910-LP-015-5750, HPBAC
  - 0910-LP-028-7760, BARS
  - FORM 114250, Diesel Engine
  - GA1651.300e-9021205, BAT
- MIP/MRC
  - 5519/016, AirPak 4.5
  - 5519/017, Emergency Breathing Air Compressor
  - 5519/018, BACS
  - 5519021, BARS
- AEL
  - CV 2-330024100
  - ARS 2-330024102
  - CVN 2-330024103
  - CG 2-3300241004
  - DDG-51 – 78 2-3300241005
  - DDG-79 AND UP 2-3300241006
  - FFG 2-3300241007
  - LCC 2-3300241008
  - LHA 2-3300241009
  - LHD 2-3300241010
  - LPD-4 2-3300241011
  - LPD-17 2-3300241012
- AEL CONT.
  - LSD 2-3300241013
  - MCM 2-3300241014
  - MHC 2-3300241015
  - SSN 2-330023100
- APL
  - 990990717, ABPA
  - 990580009, BAT
  - 990580002, SCBA (30-min) (Fiberglass)
  - 990580003, SCBA (45-min) (Fiberglass)
  - 99A010025, SCBA (30-min) (Carbon)
  - 99A010026, SCBA (45-min) (Carbon)
  - 99A040169, SCBA (30-min) (Carbon) (CBR-N)
  - 99A040170, SCBA (45-min) (Carbon) (CBR-N)
  - 06A990004, Compressor
  - 668880096, Diesel Engine
  - 061000005, Compressor (Diesel-Driven)
  - 489980675, HPFA
  - 249990138, Battle Lantern
  - 99A010003, BARS
- EOSS
  - Diagram HP Air System / Procedure HP Air System
- Ship Installation Drawings
  - Redline Drawing to PY for SSR Update
- Equipment Serial Numbers
- SCBA Training CD’s (Scott Air Pack Operation/Maintenance; Breathing Air Charging Station Operation/Maintenance; Breathing Air Tester (BAT))